

9 Session 7: Energy Saving Performance Contracts: Forms and Financing Options

Overview of Activities Related to Energy Efficiency Improvement in Finland.

Presenter: Mr. Jorma Pietiläinen. VTT, Finland.



*Overview of some activities related to
energy efficiency improvement in Finland*

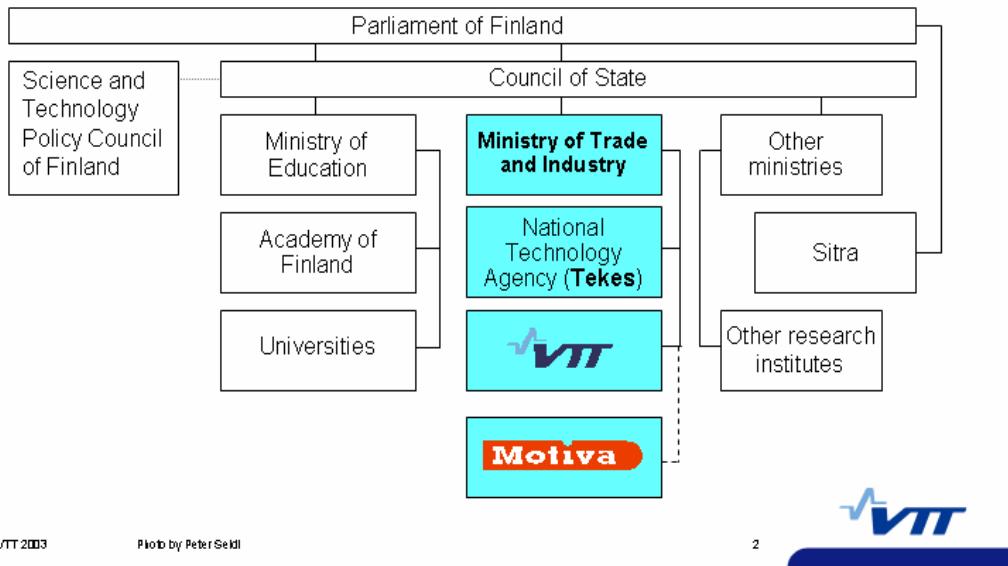
Jorma Pietiläinen



Report Documentation Page			<i>Form Approved OMB No. 0704-0188</i>		
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THE MOST IMPORTANT DECISION MAKERS, FINANCERS AND PERFORMERS OF RESEARCH IN THE PUBLIC SECTOR



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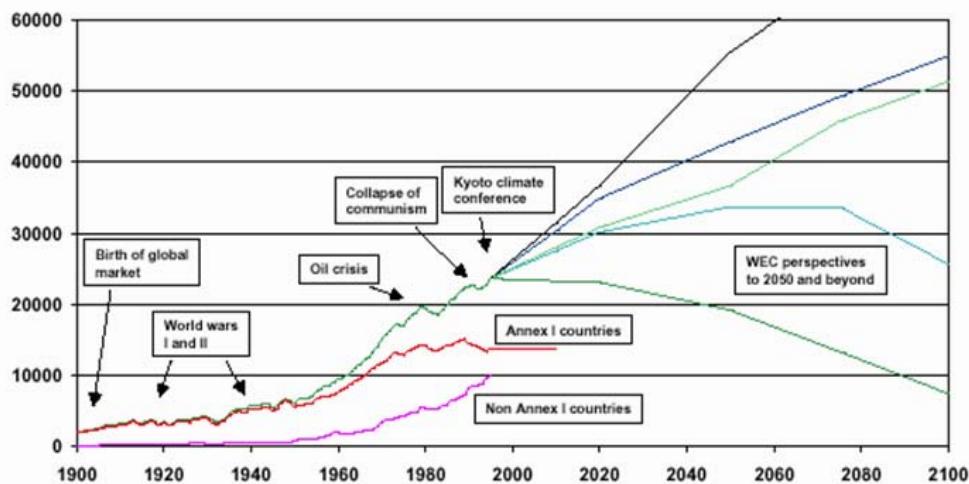
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Global CO₂ emissions (MtCO₂/a) 1900-2100



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Environmental threats:



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Energy Conservation Programme

- Launched in 1992
- Revised and intensified in 1995
- Intensified in 2000
(as a part of preparing the National Climate Strategy)
- Updated 2002

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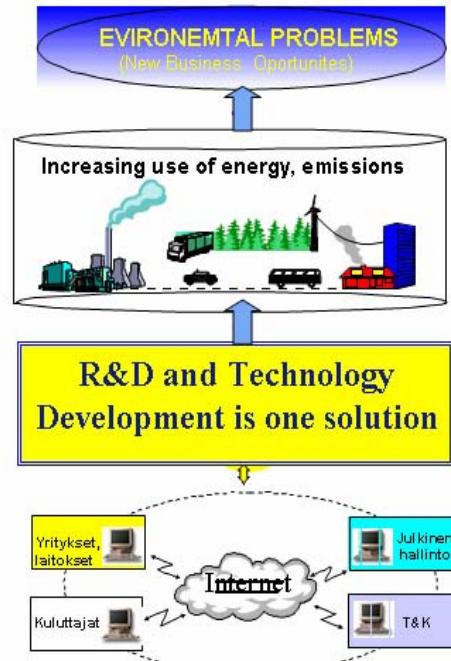
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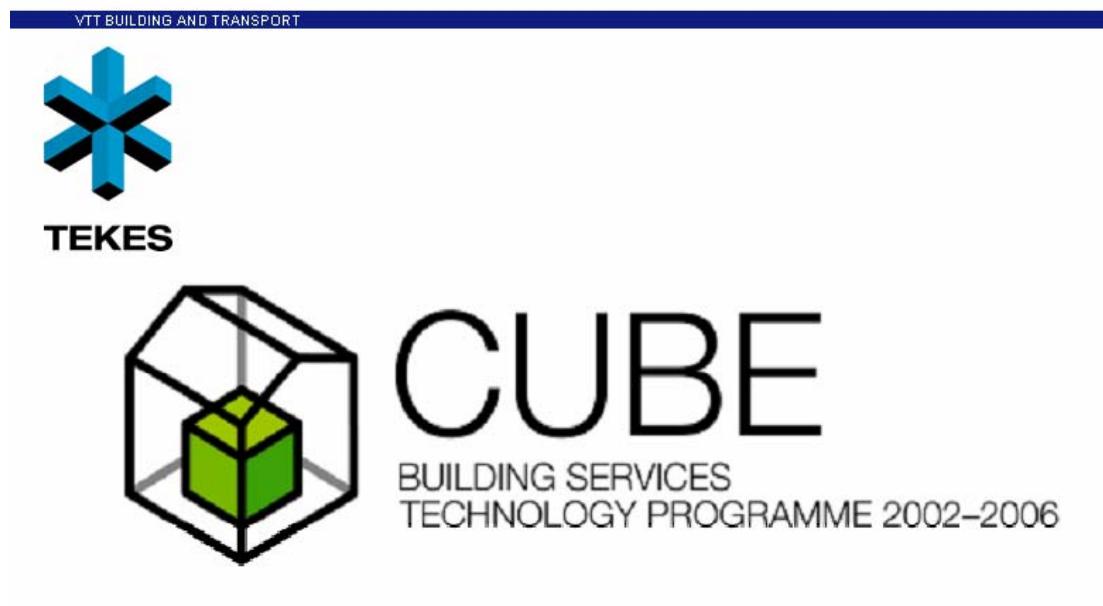
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The key elements of Energy Conservation Programme:

- Development and commercialisation of energy efficient technology
- Economic means of steering
- Building regulations (e.g. new EU Directive)
- Voluntary energy conservation agreements
- Energy audits and ESCO activities
- Information, training and motivating activities

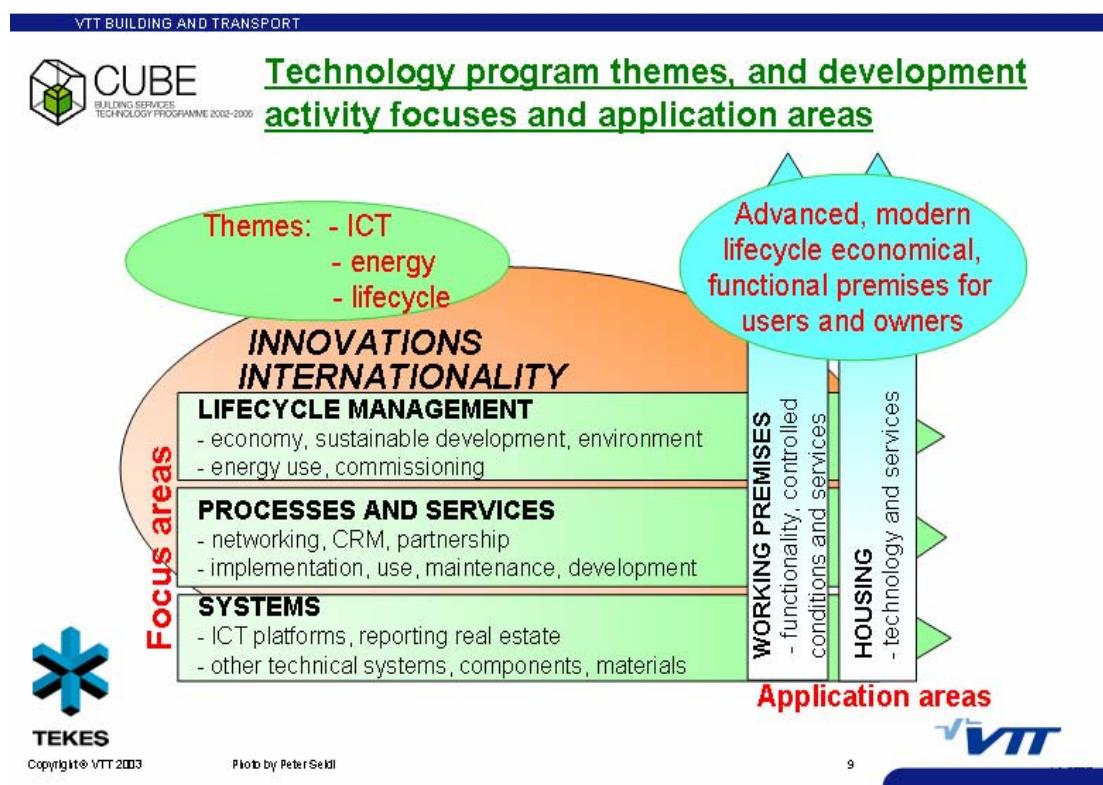


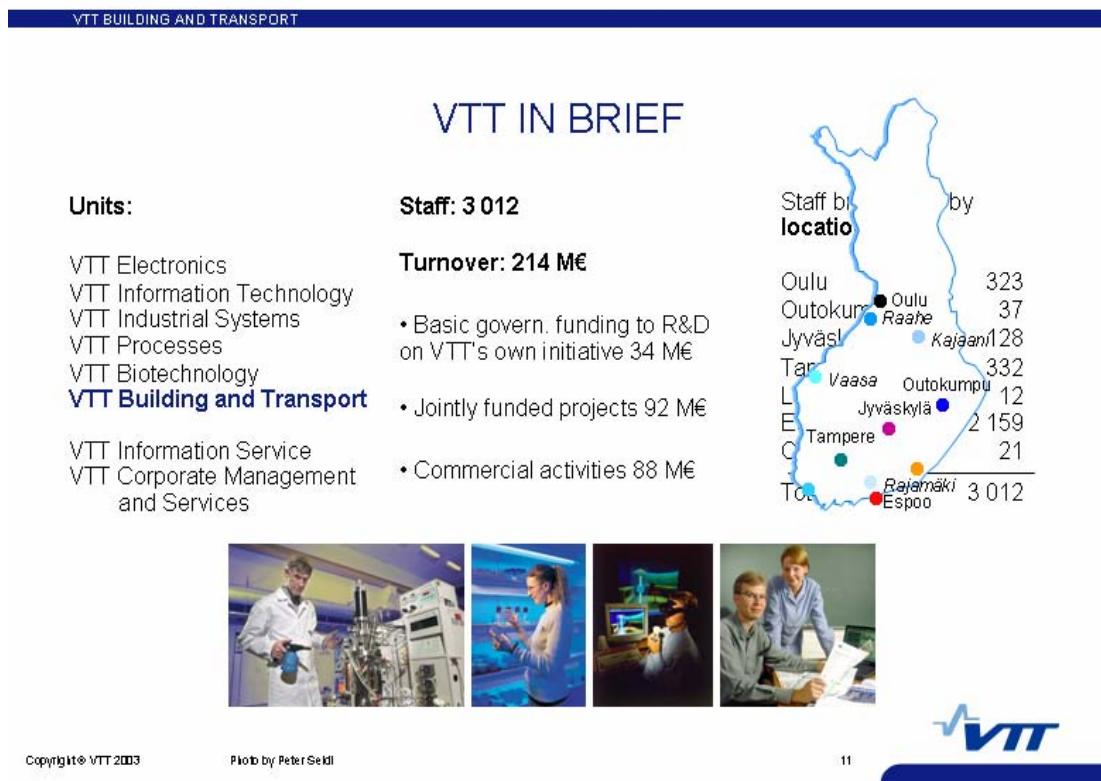
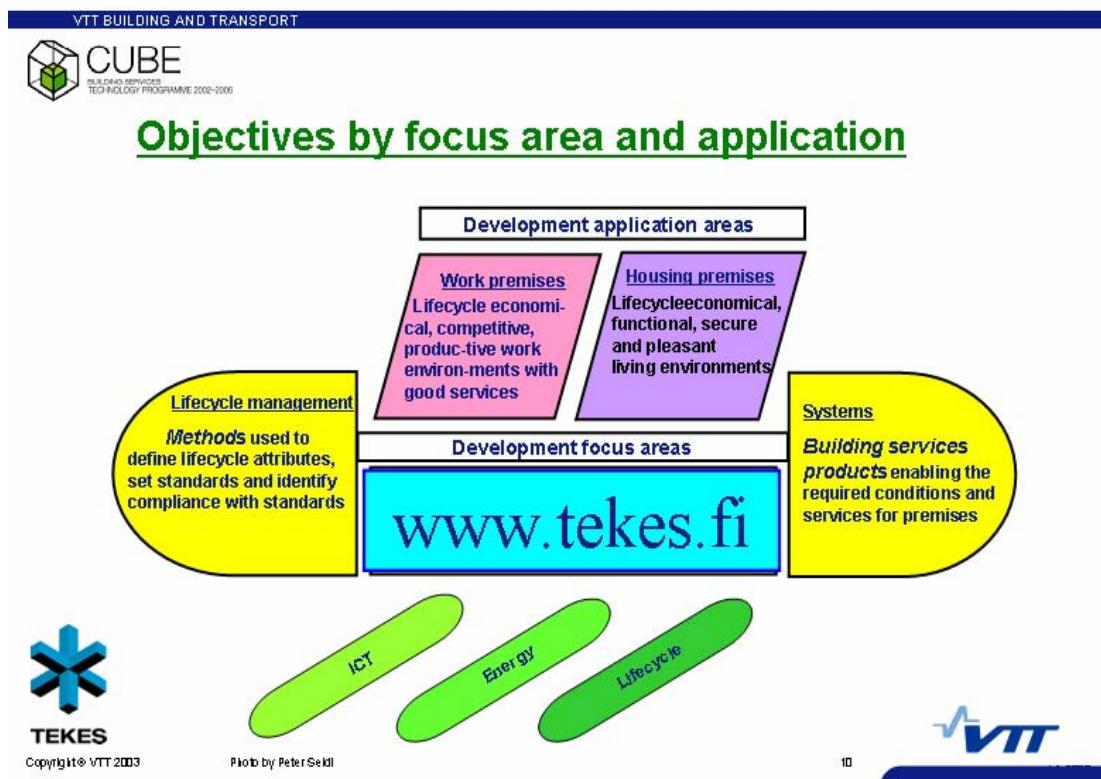


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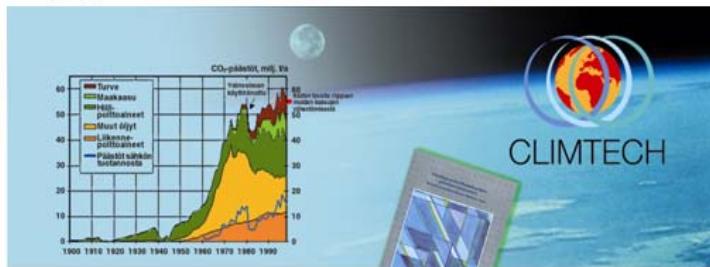
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Support for National Climate Strategy



VTT has prepared a report for the Finnish Ministry of Trade and Industry on the technological development outlook for the control of greenhouse gas emissions. The report is intended to support decisions concerning the National Climate Strategy.

VTT has also participated in studies of the the economic effects of reducing greenhouse gas emissions.

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Development of Low-energy houses

Heating energy consumption less than half of conventional buildings
=> reduced emissions

Good indoor air and demand controlled, i.e. adjustable ventilation

Reduced life-cycle costs



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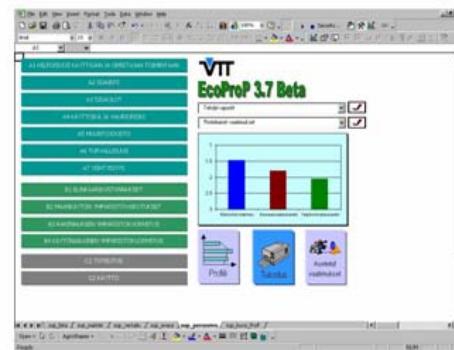
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Tools for managing life-cycle costs and environmental requirements

- VTT Building Technology has developed tools for calculation of life-cycle costs and for management of environmental requirements, such as a method for classifying life-cycle cost calculation methods, a system for assessing the life-cycle costs of technical systems and EcoProp system for management of environmental requirements



- EcoProp can be used to numerically define the performance characteristics and environmental characteristics of a building on the basis of the needs of the property owner and occupants, and design solutions can be developed to meet the set targets; the inclusion of life-cycle costs quickly reveals whether the desired level of requirements is in conflict with the cost targets

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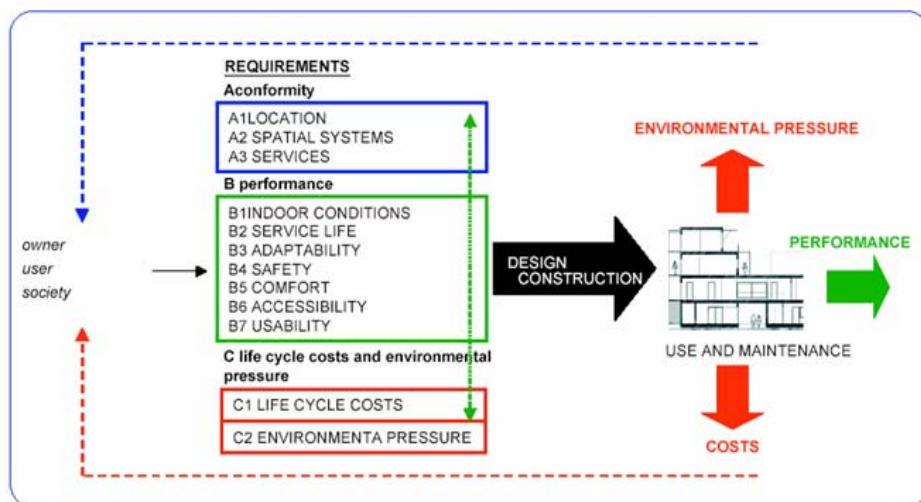
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Requirements management - EcoProp



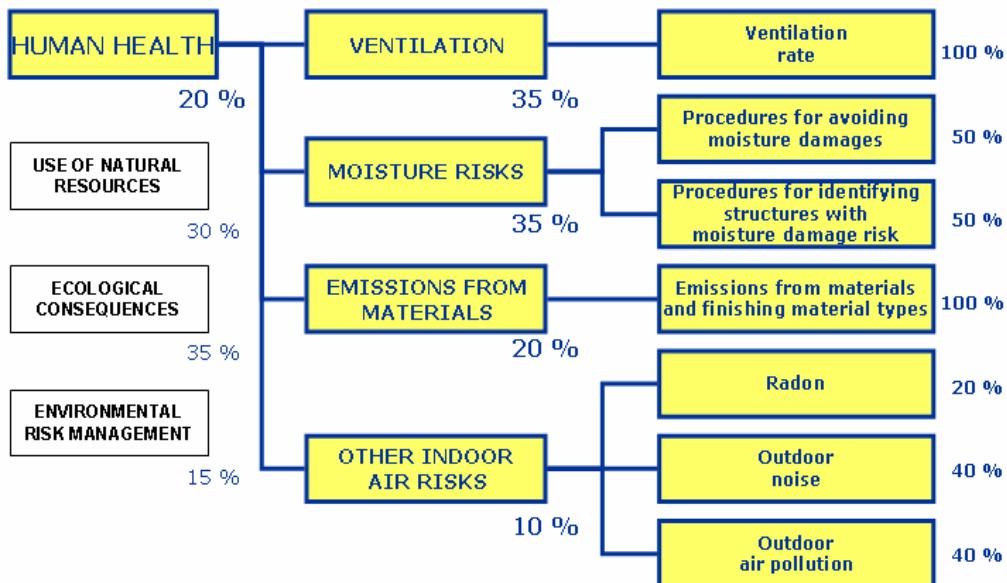
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PromisE - environmental classification for buildings:



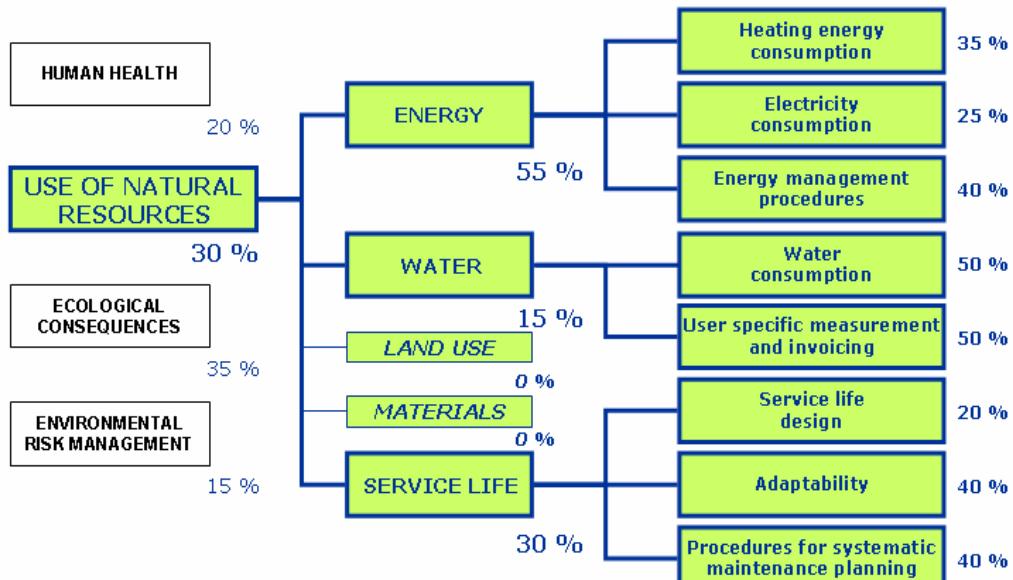
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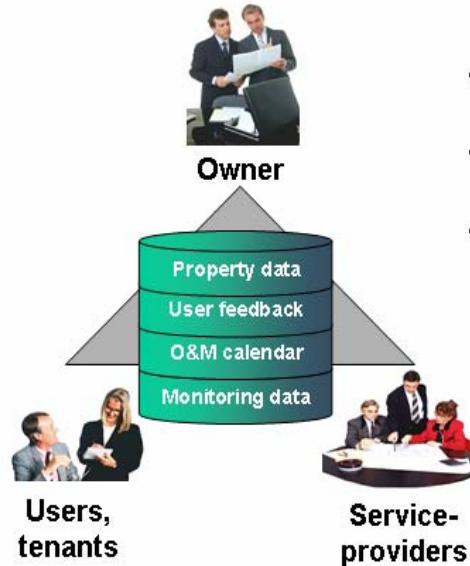
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OIWA, web-based O&M Manual



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User Interface for House Manager

Käyttäjäpalautteet:

Ikkuna
Lämmitys
Ovi

Maaliskuun palautejakauma (5 kpl)
02.03.2002 klo 01:25

Palauteiden kokonaistilanne: 60%

Huoltokalenteri:

Vilkkopaketeista tehty: 33%

Maaliskuu paketeista tehty: 13%

Käyttöpäiväkirja:

- Yöpäivystäjä tiedottaa (01.03/esiitely) *Huoltoon pääsi aina!*
- Ilmoitusasia (23.10/mhy) *Uraa vesi paiväjämerkitä. Täydentämällä lomakkeen tiedot ja klikkaamalla Tallettaa-napista. Vain huoda uuden lomakkeen klikkaamalla [...] -näppäile.*

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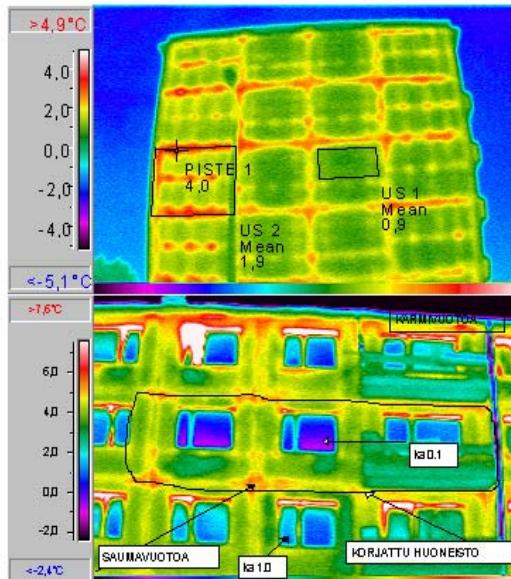
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Thermography in building commissioning



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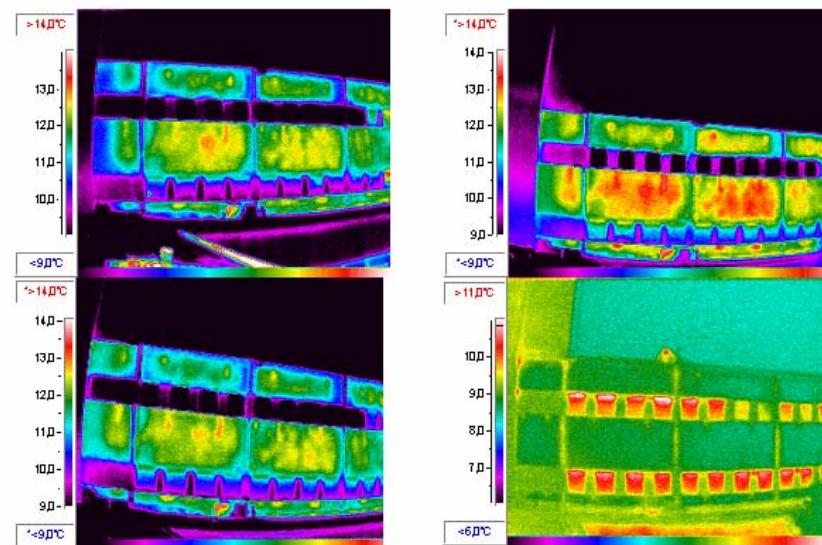
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Moisture problems in the concrete sandwich panel



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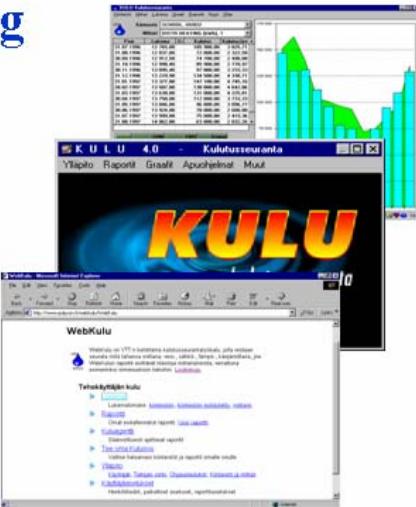
VTT develops effective tools for Energy



- ⇒ Monitoring & Targeting
- ⇒ Benchmarking

- ⇒ **Analysing**
- ⇒ **Auditing**
- ⇒ **Assessment**

⇒ Feedback
⇒ Motivation



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Monitoring = Basis for Everything!

- Reliable consumption data forms the **basis for energy retrofitting and saving measures**
- **Verification** of implemented saving measures is impossible without reliable consumption figures:

- Monitoring can be used to implement the **Building Energy Certification** schemes (see Energy Star of EPA/USA)
- Feedback for **M&O personnel** is the key (basis for motivation, training etc.)
- **Statistics, etc. information, decision makers, designers, users, owners, authorities etc. etc. must** be produced too

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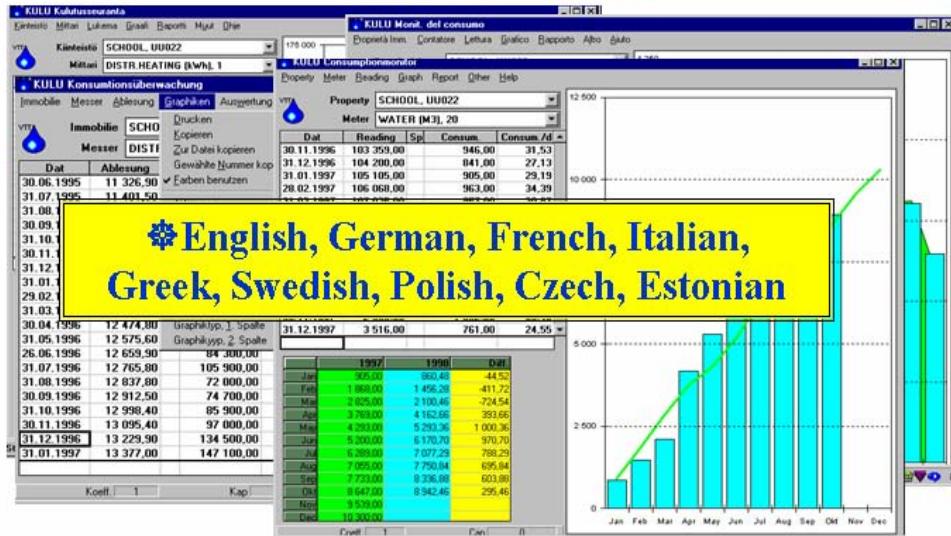
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Support for several languages



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More professional tools for big organisations:

like Portable Bar
Code Scanner



KAUKOL.ENERGIA



MI00800001



for effective meter
reading and data
collection e.g. in the
Ministry of Defence in
Finland!

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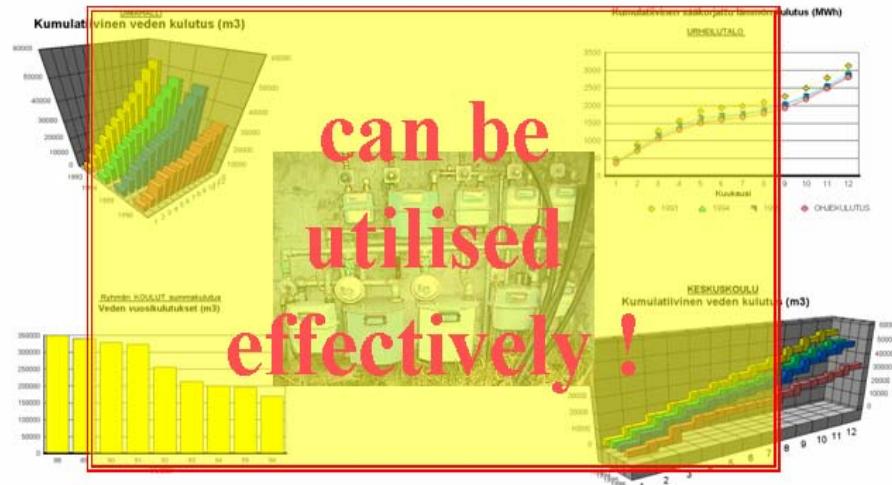
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Data from Existing Utility Meters



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“Anomalies” can be found easily...

Report Viewer - 1

Koko kanta

HÄLYTYSRAPORTTI: Lämpötila (°C) (0.09)

(kk=kuukausien lkm, jolloin kulutus > 0)

→...and wasters,

→leakages, abnormal

consumptions, etc. can

be detected

immediately!

Koodi	Paikka	200004	200001	kk	090004	100004	kk	Muutus	%
HEL21708	eli...in Ylä	569	0	0	0	0	0	326	326
HEL21724	Stallansy tagst	49.327	1	1	14.789	1	1	34.238	234
HEL21186	Pakilan ylaastee	270.013	1	1	88.433	1	1	181.580	205
ESP40300	ROOSKOG SKOLA JA	17.156	1	1	5.907	1	1	11.249	190
HEL2499	Niittilän l...	1.769	0	0	1.558	2	2	227	13
HEL249	Niittilän l...	1.769	0	0	1.558	1	1	211	82
HEL21507	Toivrynummen ala-	83.316	1	1	45.853	1	1	37.463	82
ESP41050	MATTBY GÅRD	26.120	1	1	14.631	1	1	11.489	79
POR 184	TUORSNIEMEN ALA-	22.499	1	1	12.591	1	1	9.908	79
POR 51	TOUKARIN ALA-PT	20.114	1	1	9.980	1	1	12.364	77
ESP40490	PERKKALAAN KOU	1.014	0	0	1.843	1	1	34.527	65
ESP40690	LAURINLAHDEN KOU	71.371	1	1	44.142	1	1	27.229	62
POR 172	VAHARAUMAN ALA-A	92.430	1	1	57.037	1	1	35.393	60
HEL21895	Sibelius-talo	14.604	1	1	89.752	1	1	54.292	60
HEL45013	Itä-Tapanilan	3.340	0	0	3.779	1	1	25.401	54
ESP40520	MATTILIDEN KOU	7.005	1	1	12.362	2	2	145.693	45
HEL21459	Munkkivuoren ala	230.300	1	1	164.061	1	1	74.239	45
LAAS4820	LAASMETCEN KOU	400.462	4	4	73.466	4	4	32.002	20

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Modern ICT will be utilised in collaboration with Finnish companies!



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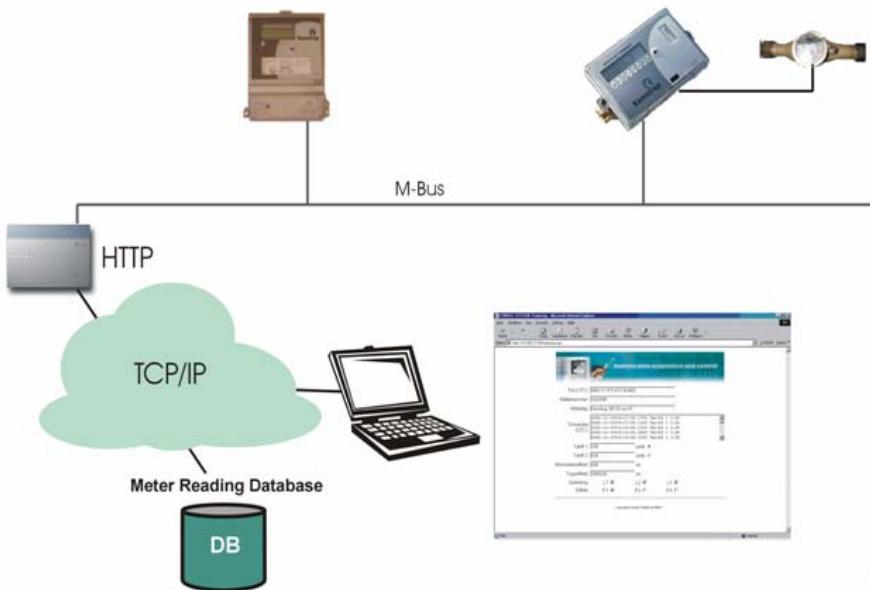
M-Bus

Comsel M-Bus solution

Electricity

District Heat

Water

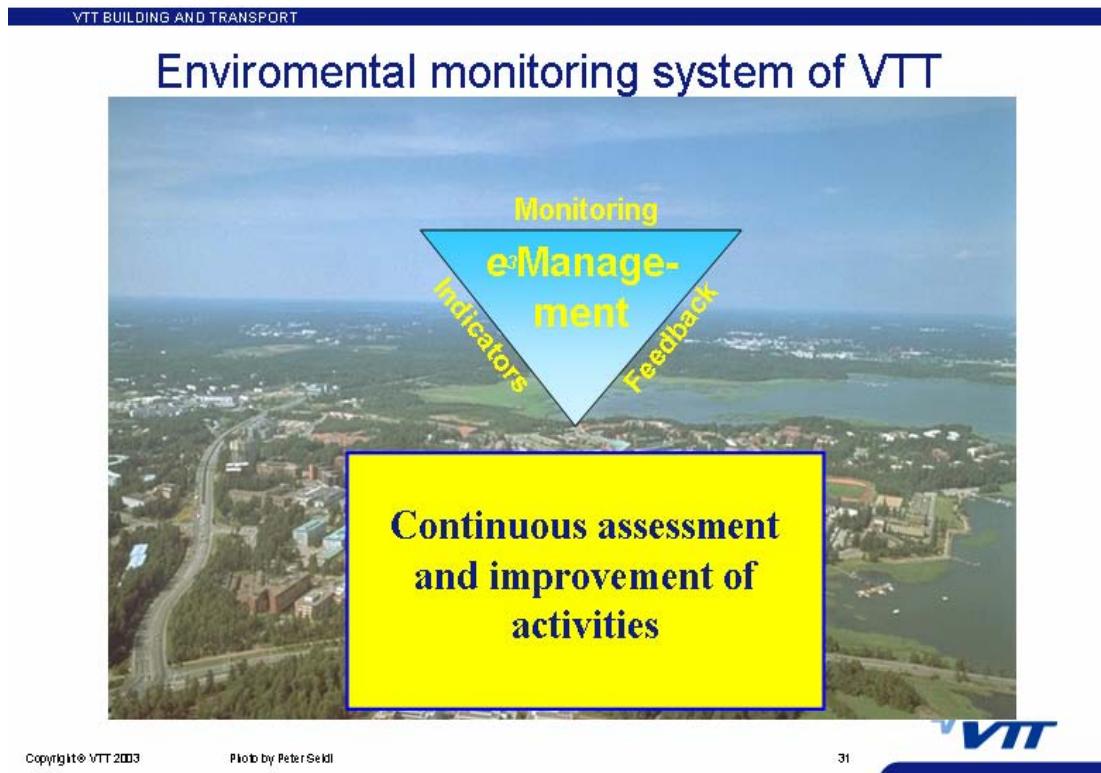
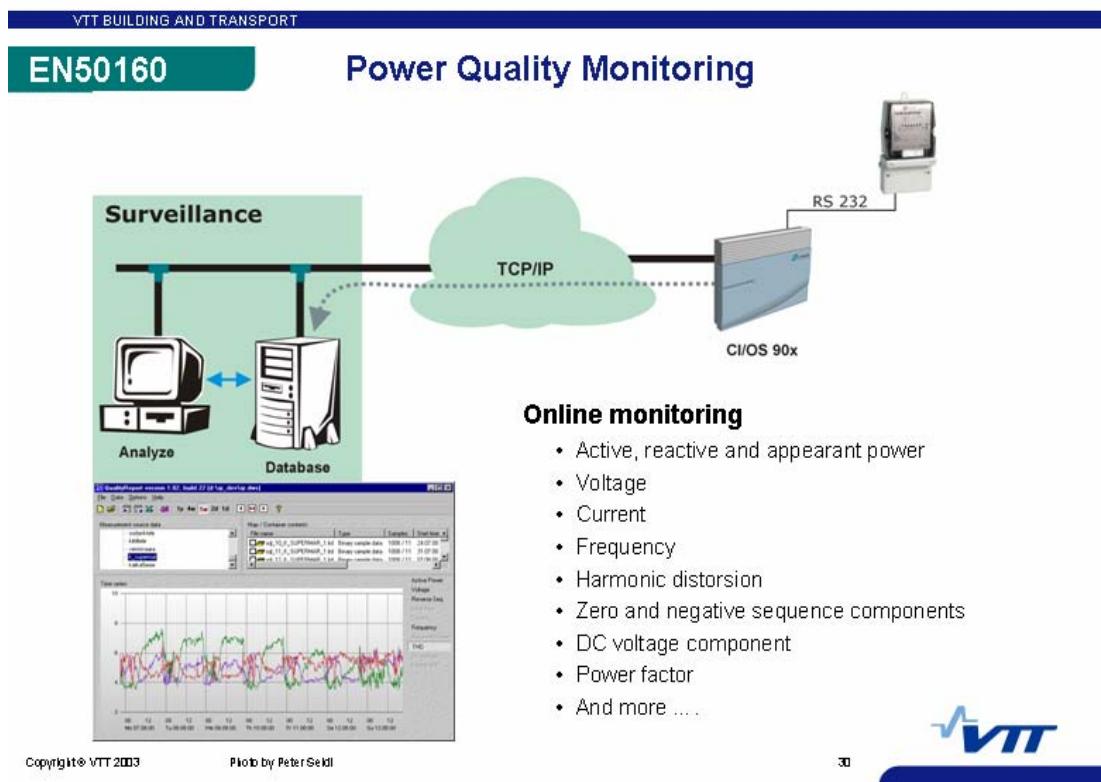


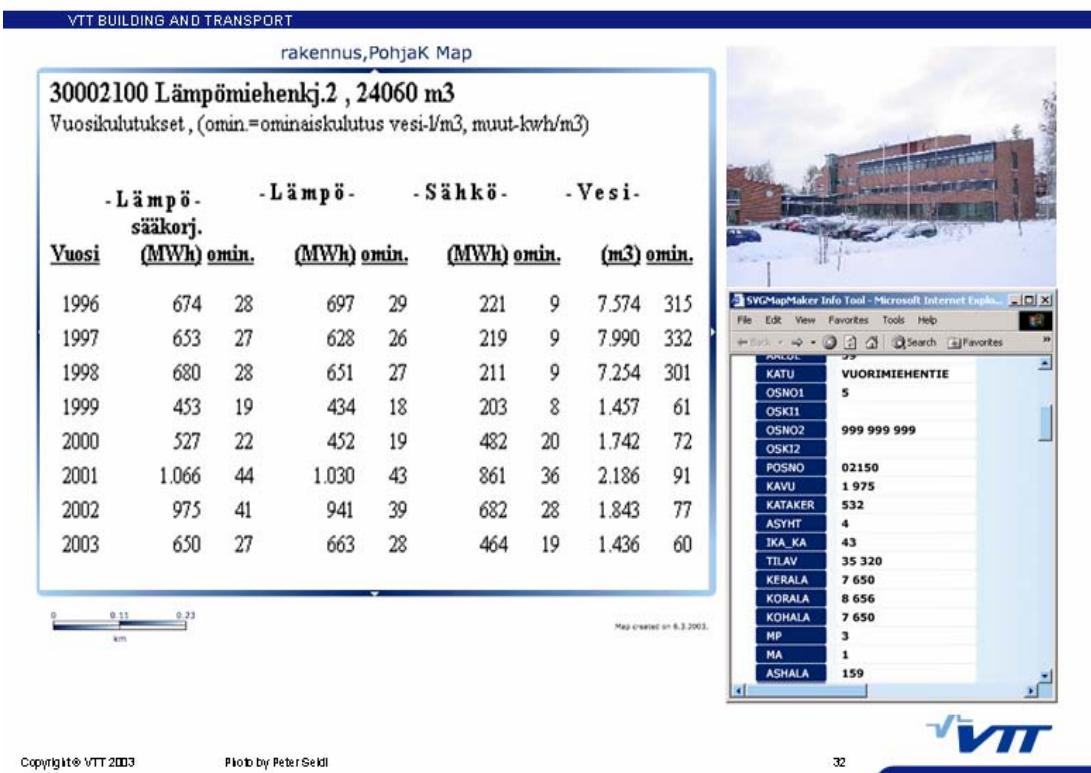
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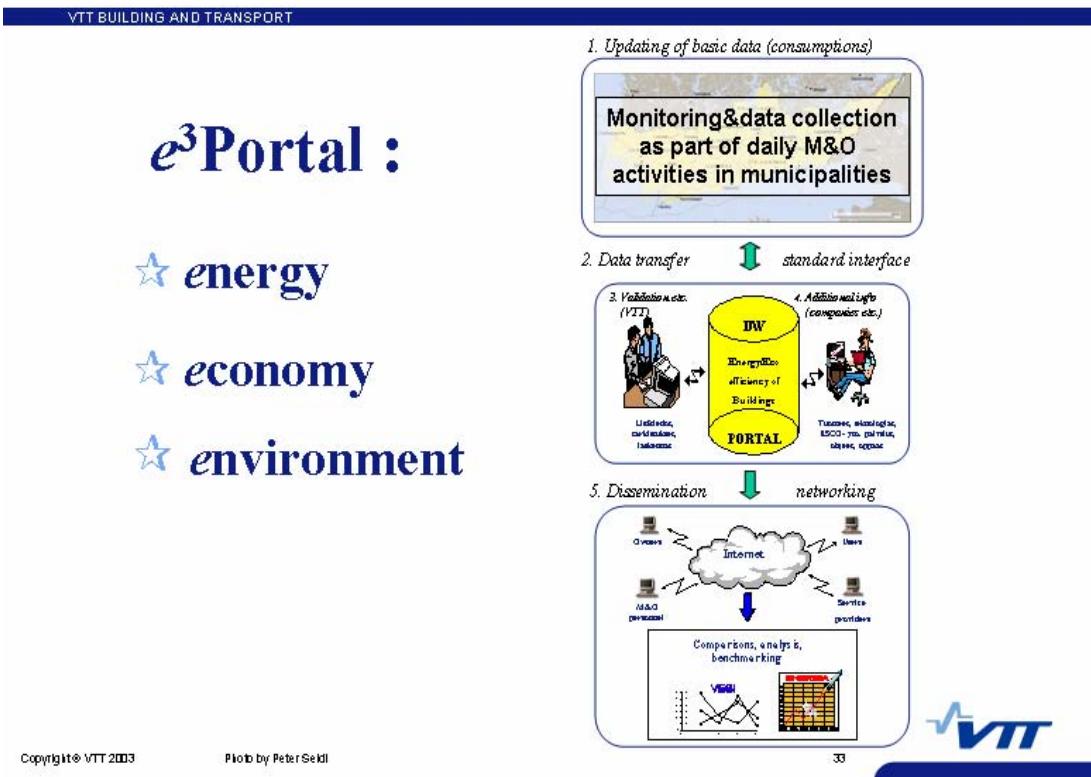




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eManagement
Setting Targets
Monitoring of cons.
Benchmarking
Saving measures
Best Practices
Toolbox
Clearinghouse
Help

Hae OK

e3P-1.0-
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VTT Rakennus- ja
yhdyskuntateknikka

e3Portal for Municipal Buildings

Energiatehokkuus on tärkeä osa kestävän kehityksen toteutumista kunnissa ja kuntayhtymissä.

Tarkoituksenmukaisella ja tehokkaalla energian käytöllä vähennetään ilmastonmuutosta aiheuttavia kasvihuonekaasupäästöjä ja saastetaan ympäristöä myös jalkipolville.

e3P palvelun esittelyversion tarkoituksena on konkreettisoida palvelun mahdollista sisältä, toimintaa ja hyödyntämismahdollisuuksia.

Latest News!

10.9.2003 e3Portaalilta Kuntamarkkinoilla
10.9.2003 e3Portaalilta julkostetaan kultutuslukemia tiedoksi

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Energiatehokkuus
KUINTEISTÖJEN ENERGIANHALLINTA
TAVOITEKULUTUKSET
KULUTUSSEURANTA
Perustietoa kulutusseurannasta
Kulutusseuranta kunnissa
Lämmitystarveluvut kulutusseurannan tukena
Palvelut ja ohjelmistot
KUINTEISTÖJEN ENERGIANKULUTUS
TEHOSTAMISKEINOIT
RAHOITUS- JA TOTEUTUSMALLEJA
TYÖKALUT
TIETOPANKKI
OHJEET JA INFO

Hae OK

e3P-1.0-20030909
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Energy Management

Kiinteistön energianhallinta on prosessi, jonka tavoitteena on ylläpitää kiinteistössä hyvät sisäoloehdot ja palvelutaso mahdollisimman pienellä energiankulutuksella ja kustannuksilla. Energianhallinta voidaan prosessina jakaa pitkän ja lyhyen tähtäimen toimintoihin

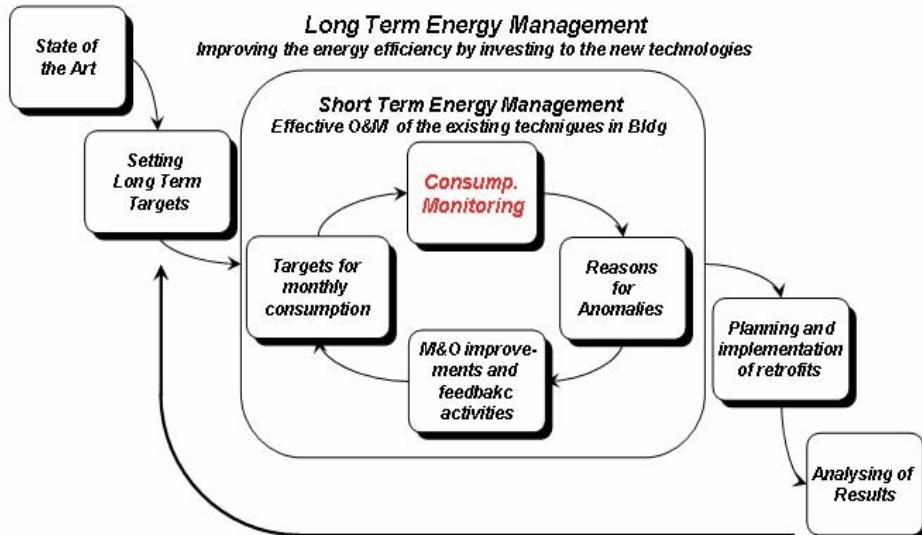
Energy Management Strategies

Pitkän tähtäimen energianhallinnalla pyritään vaikuttamaan energian käytön rakenteeseen mm. pitkävaikuttisten

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Energy Management Strategies



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på svenska | in English

- ▶ **Etusivu**
- ▶ **KIINTEISTÖJEN ENERGIANHALLINTA**
- ▶ **TAIVOITEKULUTUKSET**
- ▶ **KULUTUSSEURANTA**
- ▶ **KIINTEISTÖJEN ENERGIAKULUTUS**
 - ▶ Julkisia energiankulutustietoja
 - ▶ **e3P-kulutustietopalvelu**
 - ▶ Ominaiskulutus kunnittain
 - ▶ Ominaiskulutus rakennustyypeittäin
 - ▶ Ominaiskulutus rakennusvuosittain
 - ▶ Ominaiskustannus
- ▶ **TEHOSTAMISKEINOT**
- ▶ **RAHOITUS- JA TOTEUTUSMALLEJÄ**
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Hae

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Benchmarking - an effective tool

Specific Consumption of Energy in some Schools of Helsinki

Heating		(kWh/m ³)				Total cons. year 1999 MWh)
Code	School	1996	1997	1998	1999	
HEL21187	Kontulan	81,1	83,1	89,4	82,2	218
HEL21690	Pukinmäen	24,7	87,3	93,5	81,6	110
HEL21648	Pohjois-H	64,9	71,7	86,7	74,6	42
HEL21186	Pakilan y	44,7	62,3	66,4	61,8	270
HEL21198	Vesalan y	52,6	53,8	54,3	57,5	343
		48,5	51,5	56,5	56,5	105
						828
						531
						454
HEL21143	Jakomäen	41,6	40,4	44,6	44,3	211
HEL21055	Oulunkylä	45,3	45,3	54,8	43,9	828
HEL21185	Pakilan a	41,7	42,5	44,2	43,8	765
HEL21236	Käpylän y	35,5	38,0	39,3	39,5	145
HEL21017	Vallilan	37,2	33,6	39,6	35,6	582
In average		47,2	49,1	57,4	50,6	

for Best Practice Dissemination!

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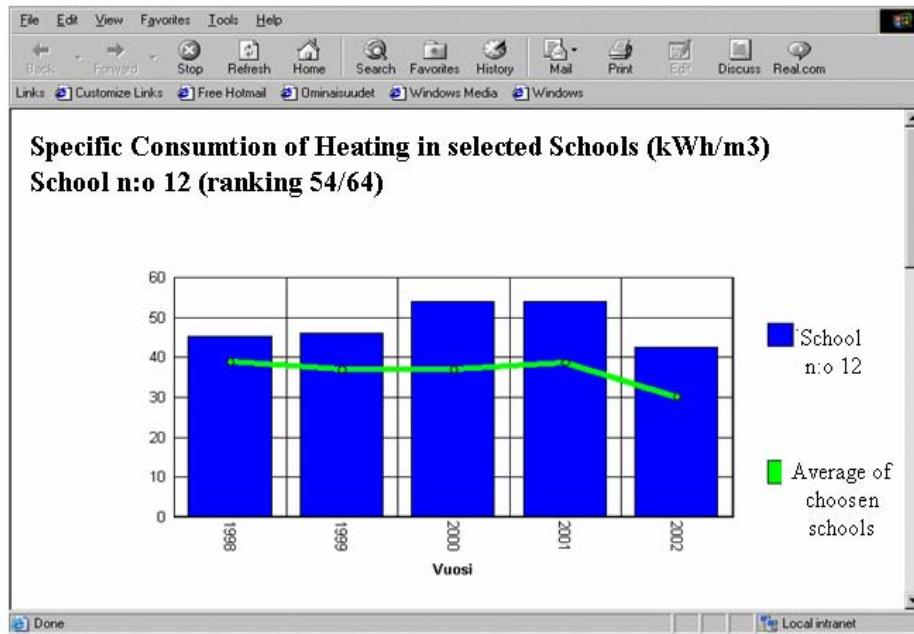
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Benchmarking Services:

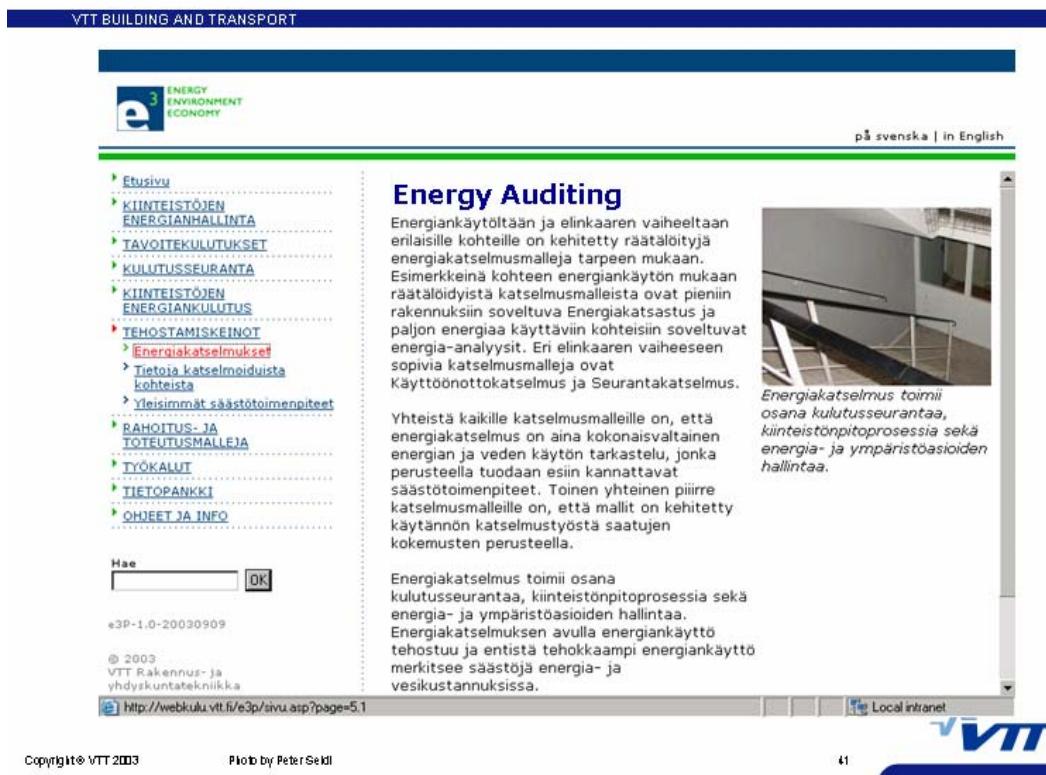
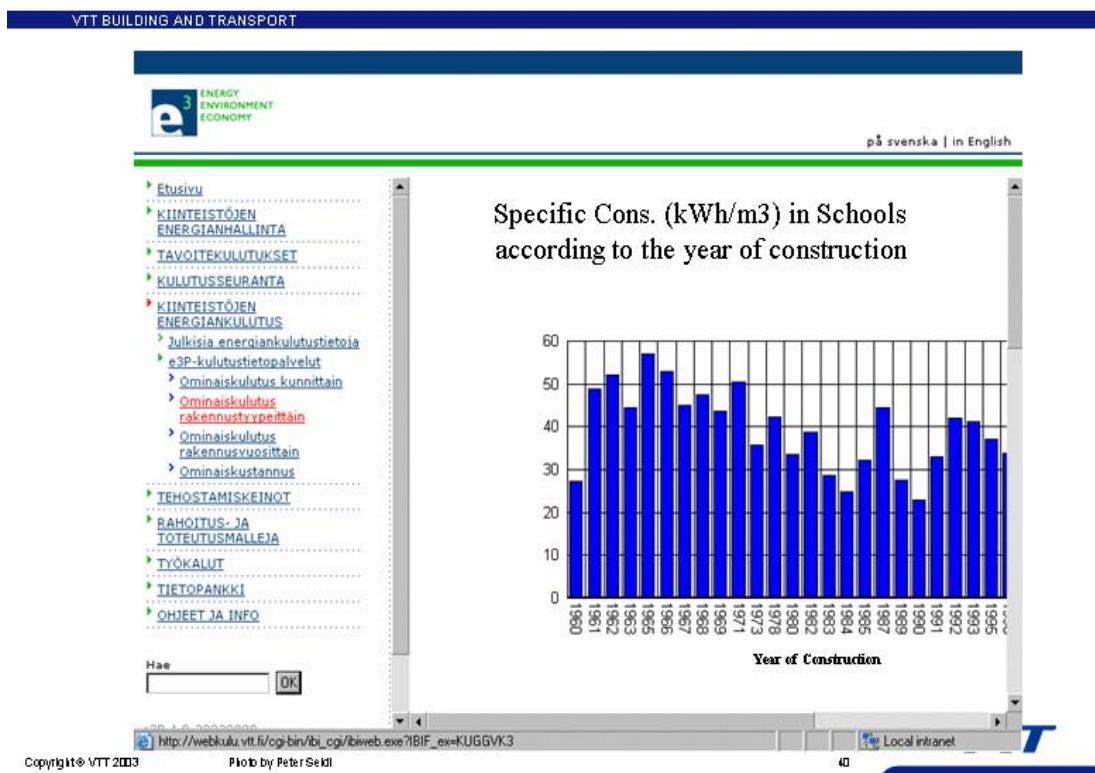


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e3 ENERGY ENVIRONMENT ECONOMY

på svenska | in English

Audited School Buildings

Koodi	Kohde
OPV21130	AMK/TELI/Onnentie 18
OPV21498	Ala-Malmin peruskoulu
KIV11899	Aleksanterinkatu 26-28
OPV21961	Akselis Kiven peruskoulu
OPV21261	Alppilan yläasteen koulu & lukio
KIV141900	Annankadun taidekeskus
OPV21346	Botby högstadieskola & Blomängens Igs
OPV21294	Brändö lägstadieskola & gymnasium
OPV21920	Cygnaeus lägstadieskola
KIV11053	Dagmarinkatu 6
OPV21966	Eläintarhan ala-asteen koulu
KIV51308	Ensihuoltoilaitos
KIV41250	Etelä-Haagan sivukirjasto
OPV21348	Etela-Kaarelan yläasteen koulu & lukio
OPV21973	Etu-Töölön yläasteen koulu & lukio
OPV21338	Gymnasiet Lärkan & Haga lägstadieskola
OPV21703	HELP/Kauneudenhoitoalan koulutusyksikkö
OPV21157	HELP/Roihuvuoren koulutusyksikkö

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e3 ENERGY ENVIRONMENT ECONOMY

på svenska | in English

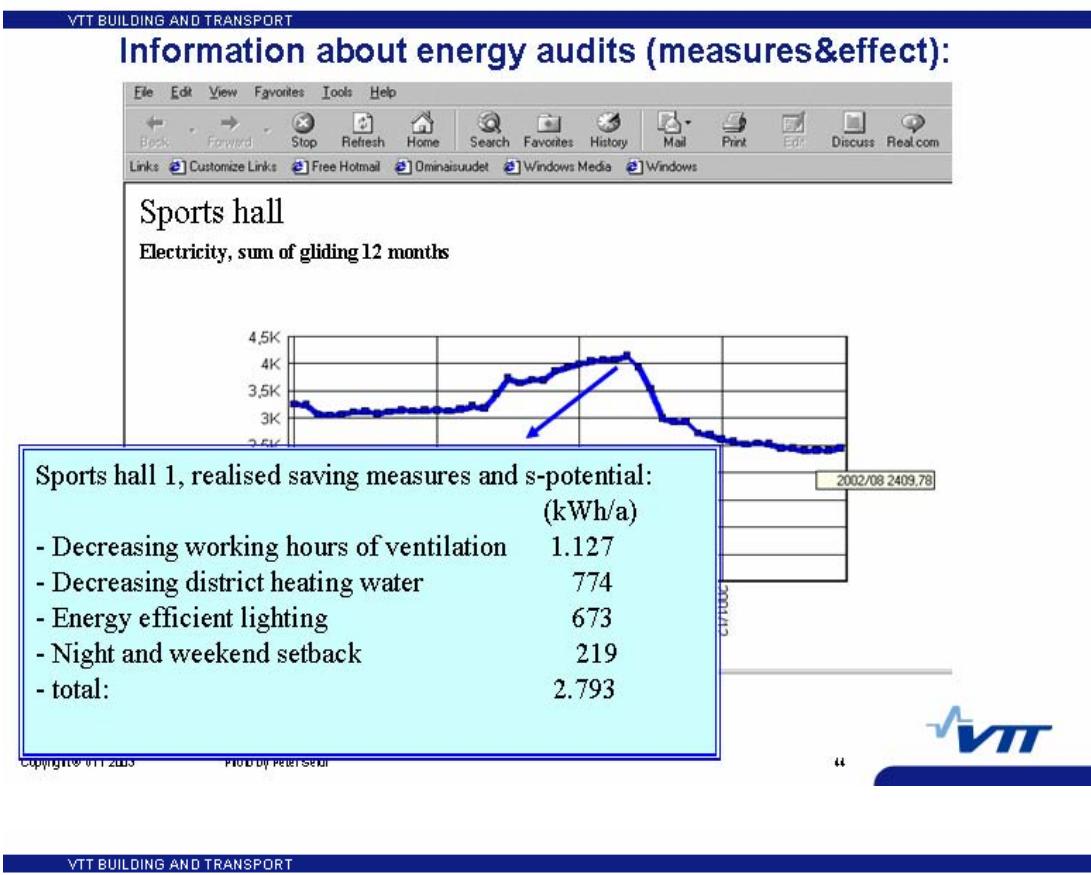
OPV21249 Pihlajamäen ala-asteen koulu
SAHKÖ (kWh), Liukuva 12 kk

OPV21249 Pihlajamäen ala-asteen koulu
VESI (m3), Liukuva 12 kk

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Motiva

Motiva is an impartial service organisation
promoting a market for renewable energy
sources and efficient energy use.

Business Idea

Motiva implements

- the National Climate Strategy,
- the Energy Conservation Programme and
- the Action Plan for Renewable Energy Sources

by activating the market for energy conservation,
energy efficiency and renewable energy sources.

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ENERGY AWARENESS WEEK

- At schools
- Examples of events
- Tools and material

VÄHÄLLÄ... ENEMMÄN

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• 6.-12.10.2003

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What is an Energy Audit?

- With energy audits we mean a systematic procedure in existing buildings/ sites/objects where the purpose is to
 - evaluate the existing energy consumption
 - identify the energy saving potential and find the potential of renewable energy sources
 - report and make detailed saving proposals

Energy auditing in Finland



Energy saving potential
Environmental requirements
Kioto Protocoll



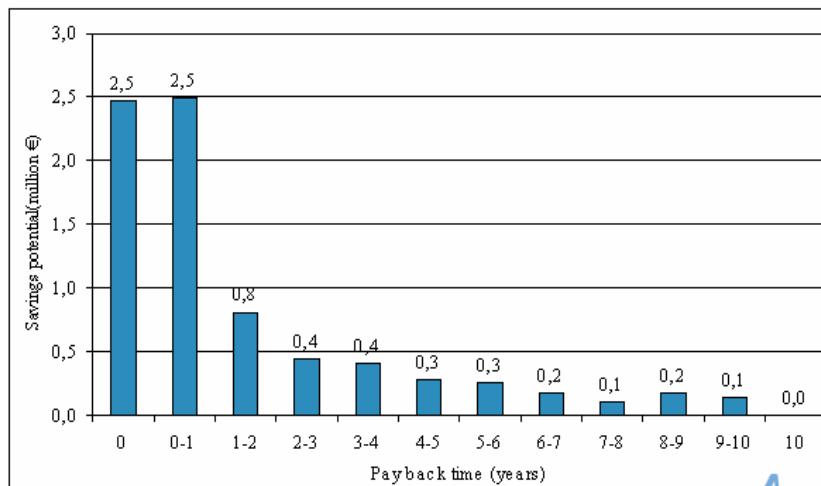
Government subsidies
for energy auditing,
Motiva Auditing Models

Implementation of renewable energy
sources, energy efficient technology and
efficient energy use.

Subsidy policy

- Energy Auditing is **voluntary**
- Following the **Audit Guidelines** given by Motiva and MTI entitles the client to apply for audit subsidies
- The subsidy is specified yearly
- In 2002 the subsidy is **40 %** of the approved auditing costs
- **Subsidies for energy saving investments are available for companies etc. in Voluntary Agreements**

Profitability of the proposed energy savings measures in the 1 265 buildings reported during period 1996-2001 (total 8,0 milj. €)



VTT BUILDING AND TRANSPORT

Motiva

Pääsivulle Motiva Oy Toiminta-alueet Yrityksille ja yhteisöille Kuluttajille Kirjasto Julkaisut Utikeskus Ekstranet-palvelut

Haku Palautte Energialinkit

<< ENGLISH ENERGY AUDITS

- Audit I project and Audit 1999 Conference
- Audit II Project
- Working Group Energy Audit, "Operating Agents' Network"

Audit I project and Audit 1999 Conference

Motiva co-ordinated the first European level study on energy auditing during years 1998-2000. This SAVE II Programme project "Energy Audit Management Procedures (AUDIT)" was implemented in co-operation with IFE (Norway) and C.R.E.S (Greece), also involved in energy auditing at national level. The Final Report presents the first theories on energy auditing as well as national experiences on all Member States. Some 1000 copies of the Final Report have been downloaded from over 40 countries since the report was published in March 2000.

(AUDIT – Energy Audit Management Procedures, SAVE II Programme, final report, [load_pdf](#))



Parallel to the AUDIT project Motiva hosted the first international conference on energy audits, AUDIT '99, in October 1999 in Finland.

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Audit II Project

(April 2001 – March 2003)

The Goals

The AUDIT II project is the second comprehensive study on energy auditing in the Member States. The first study was carried out in 1998-2000. The main aim of the AUDIT II project was to start-up long-term and continuous EU-level co-operation in the area of energy auditing and broaden this co-operation to cover also the Central and Eastern European Countries as the second step. The main aim was to be met by the following project phases:

- Update the recently concluded analysis of Member State energy audit programmes (AUDIT project)
- Analyse horizontally (5 crucial topics e.g. auditors' software, training programmes, audit models) the collected information on the national energy audit programmes in order to find the replicable elements, ideas and concrete auditing tools already in operational use or under development within in existing programme schemes
- Explore the existing potential organisations in order to find a functional home base for a network of

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The Guidebook for Energy Audit Programme Developers

Guidebook for Energy Audit Programme Developers
([GB_Printversion.pdf](#), size 834 kB)

The Topic Reports

TR Monitoring and Evaluation: Published September 2002
(AUDIT II Topic Report, [pdf](#), 221 kB)

TR Energy Audit Models: Published April 2003
(AUDIT II Topic Report, [pdf](#), size 309 kB)

TR Training, Authorisation and Quality Control:
UPDATED September 2002
(AUDIT II Topic Report, [pdf](#), size 241 kB)

TR Auditor's Tools: Published August 2002
(AUDIT II Topic Report, [pdf](#), size 193 kB)

TR Implementing Instruments: Published September 2002
(AUDIT II Topic Report, [pdf](#), 230 kB)

The Country Reports, Group I

CR Austria: Published August 2002
(AUDIT II Country Report - Austria, [pdf](#), 264 kB)

CR Belgium: Published September 2002
(AUDIT II Country Report - Belgium, [pdf](#), 247 kB)

CR Denmark: Published September 2002
(AUDIT II Country Report - Denmark, [pdf](#), 245 kB)

CR Finland: Published May 2002
(AUDIT II Country Report - Finland, [pdf](#), size 1,1 MB)

CR France: Published May 2002

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AUDIT II

Country Report
GERMANY
(Draft Version)

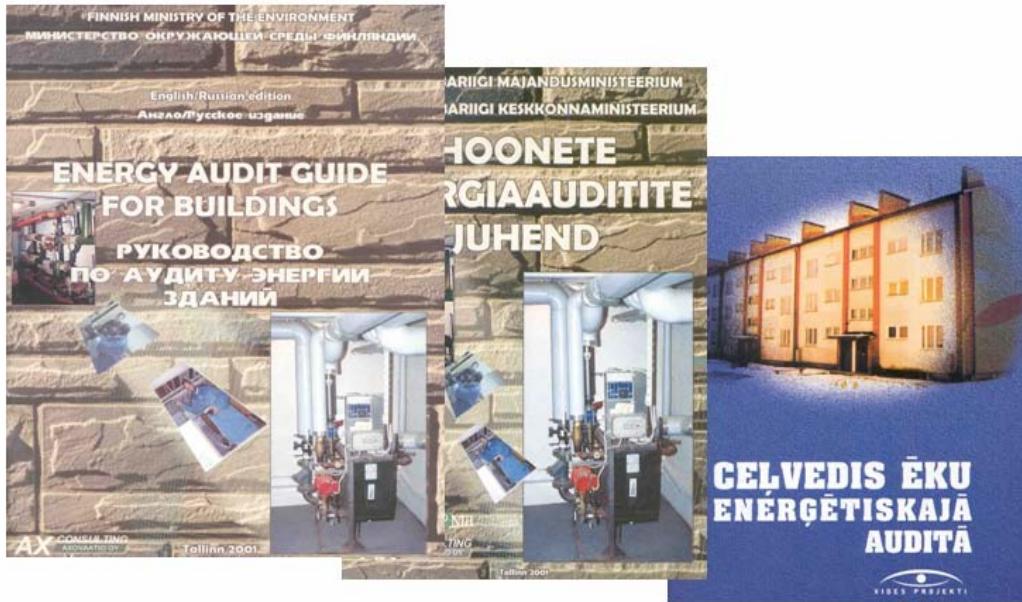
Michael Sattler
Final Report 13.12.2002



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Tools for auditors (Motiwatti-software, manuals etc.)



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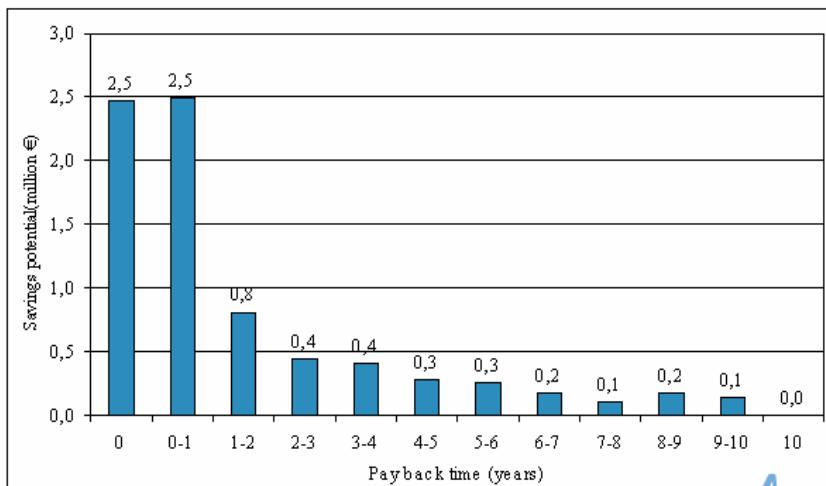
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Motiva

Profitability of the proposed energy savings measures in the 1 265 buildings reported during period 1996-2001 (total 8,0 milj. €)



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Implementing energy saving measures and investments

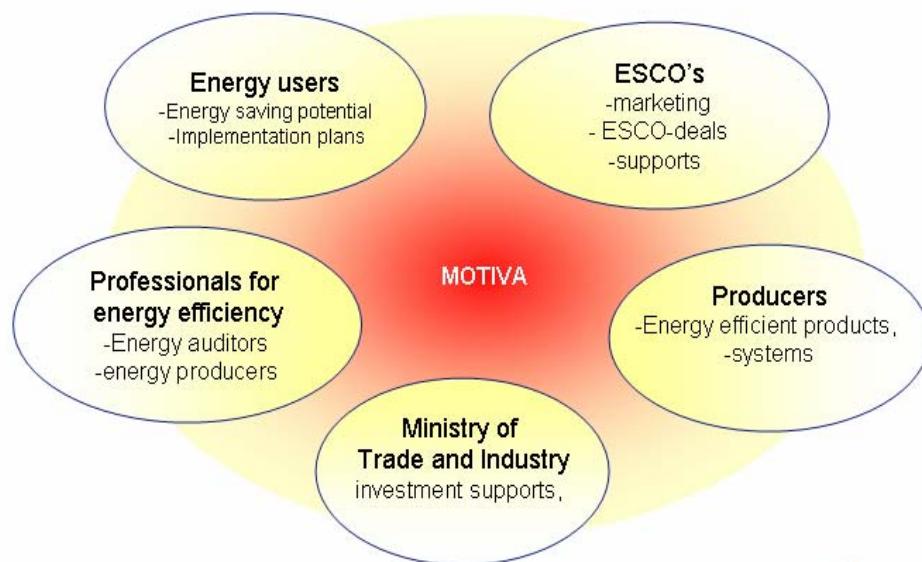
-Short pay-back times

- audit customers normally implement and finance energy saving investments by themselves

-Longer pay-back times

- suitable for ESCO companies
 - agreement periods normally 2...6 years
 - ESCO is responsible for the whole saving project (financing, saving guarantees, contracting, follow-up...)

Motiva's role promoting ESCO-business in Finland



ESCO-project register

- Target to promote ESCO-business
 - Contact information
 - Description of different kind and size of ESCO - projects
 - Following the ESCO- business volumes
- beginning : spring 2003

Situation in 9.6.2003

- Information got from three ESCO's
- Total number of projects 25
- Estimated total energy savings
 - Steam 42 400 MWh/a
 - District heat 18 400 MWh/a
 - Electricity 2 500 MWh/a
- Renewables
 - 220 MWh/a oil replaced by wood pellets
 - Electric heating replaced by heat pumps

Project examples

- heat recovery from industrial ovens
- heat recovery from exhaust air in industry
- improving the efficiency of a turbine
- replacing electric heating by heat pumps
- improving the control of a cooling systems in ice halls
- optimizing ice thickness in ice hall
- heat recovery from HVAC
- oil replacement by wood pellets
- many different heat recovery project in industrial processes

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International collaboration, like IEA Annex36

REDUCE
Retrofitting in Educational Buildings

Annex 36

ENERGY CONCEPT ADVISER
for Technical Retrofit Measures

obtain recommendations for specific problems in your building [Recommendation](#)

study more than 30 already retrofitted buildings and used technologies [Case Studies](#)

Technology

compare your own building (inter)national average [Performance rating](#)

develop an energetic retrofit concept for your building [Development](#)

use a suit of programs and methods to analyse your building performance [Utilities](#)

Info & Contact

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Annex40 (<http://www.commissioning-hvac.org>)

Commissioning of Building HVAC Systems for Improved Energy Performance

Annex 40

A research project within the framework of
The Energy Conservation in Building and Community Systems (ECBCS)

[Energy Conservation in Building and Community Systems \(ECBCS\)](#)

Program of the International Energy Agency (IEA)

Contents

- Home
- What's new
- Purpose
- Work organisation
- Work programme
- Participants
- Meeting information
- Commissioning project
- Dissemination action

Private area

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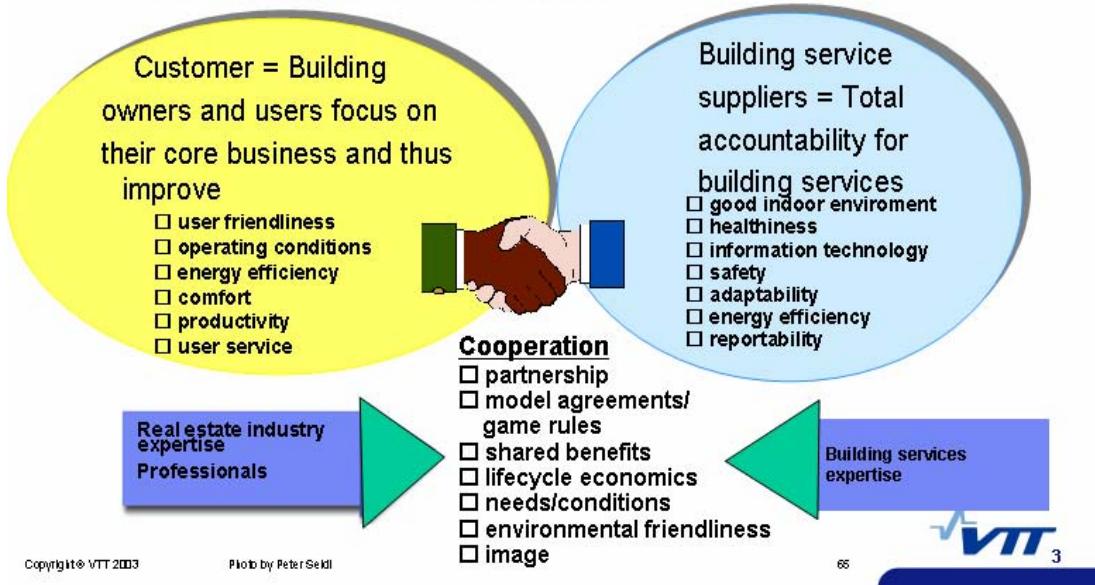
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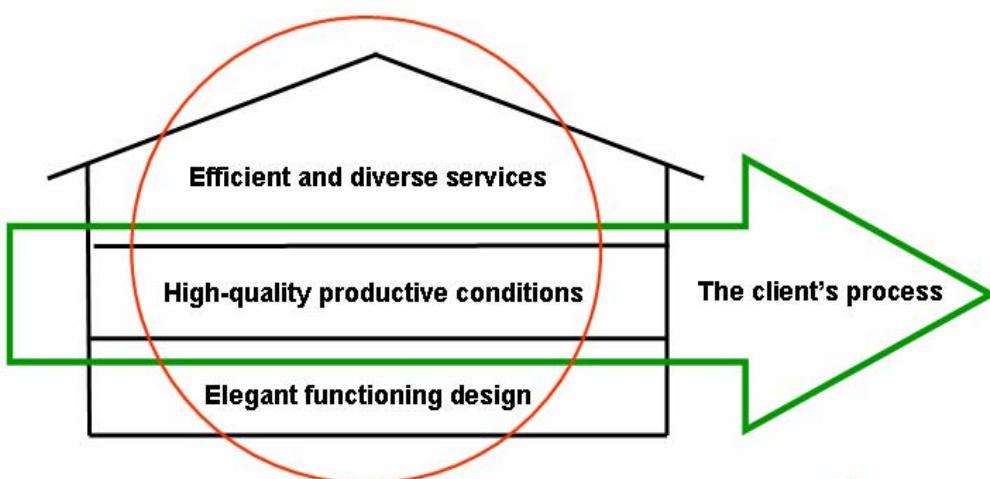
Partnership and networking

Partners focus on their core expertise





The City of Espoo will purchase a functioning entity



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Kuninkaantie Senior High School

First public and private sector partnership project in Finland

The City of Espoo:

- purchases maintenance and user services from the project company
- pays only for services provided
- 28-year collaboration model, 25-year service agreement
- with the objective of transferring an optimum amount of project risks from the city to the private service provider

Service production to be launched in the autumn of 2003.

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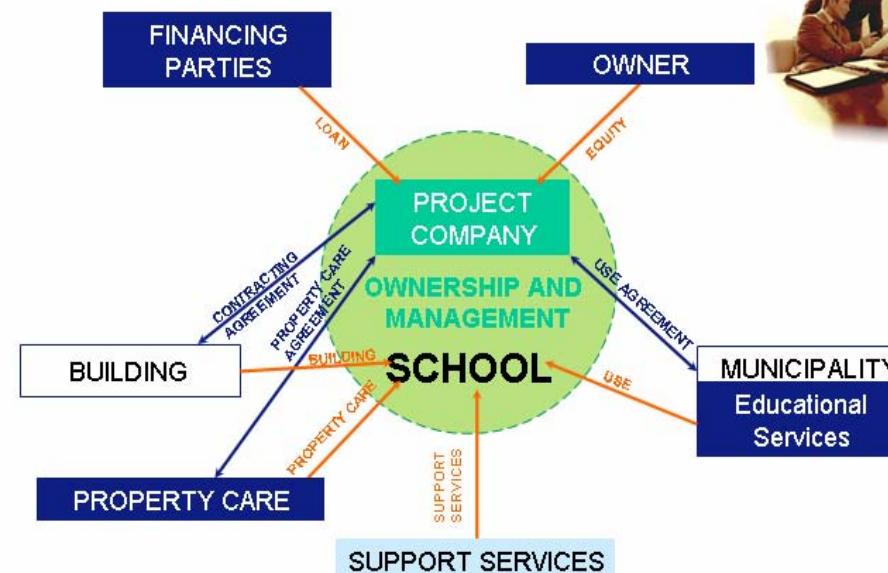
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Roles and functions



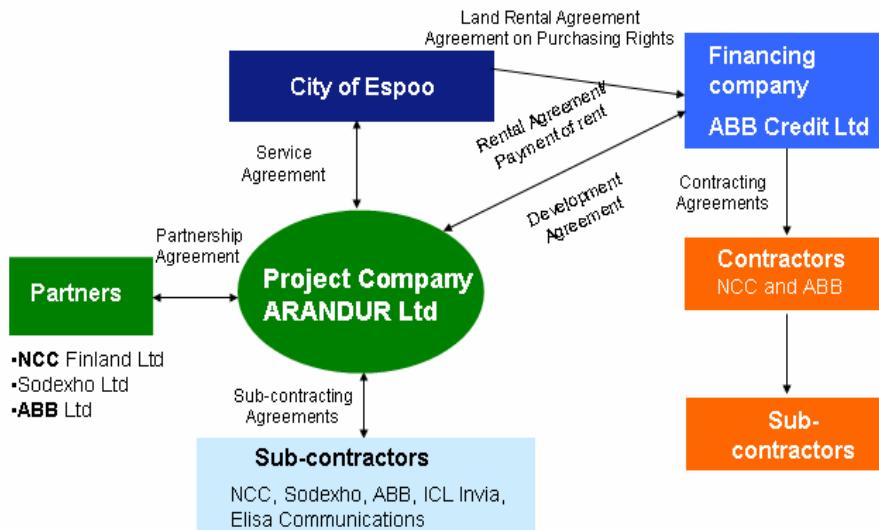
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Agreements and contracts



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T0



Thanks for your attention!



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T1



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Thank you for your attention!

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 11.5.2001
COM(2001) 226 final
2001/0098 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the energy performance of buildings

(presented by the Commission)



Building Energy Certification
Energy Audit Procedures
New Building regulations

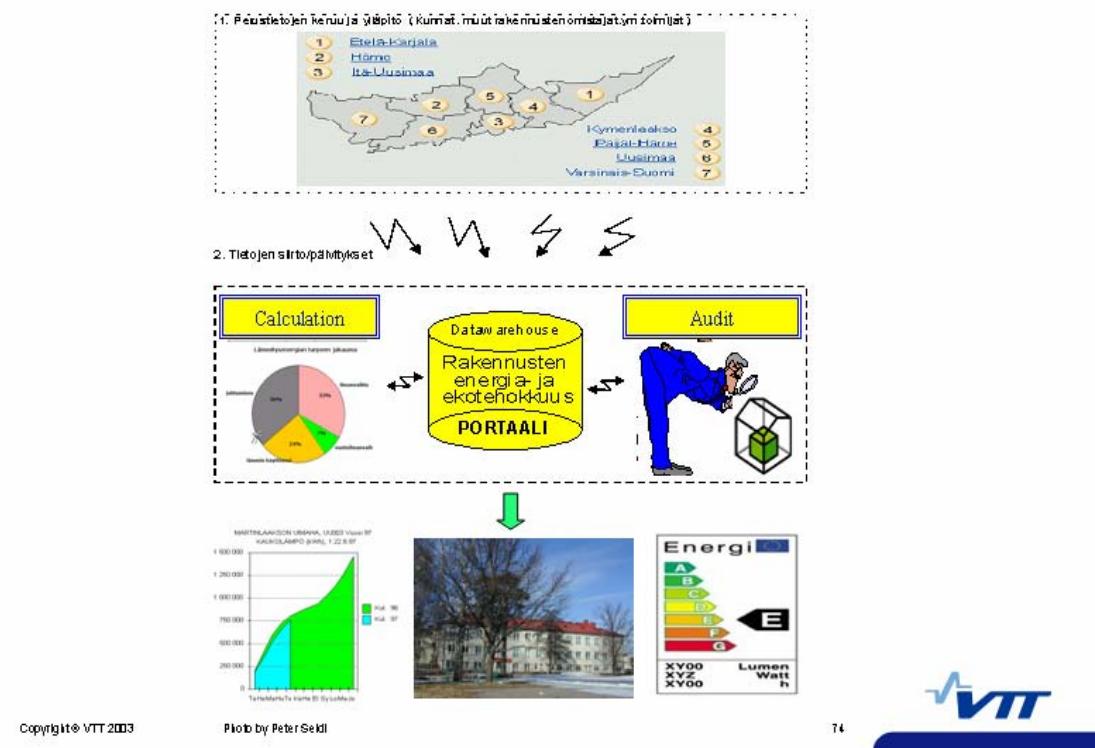
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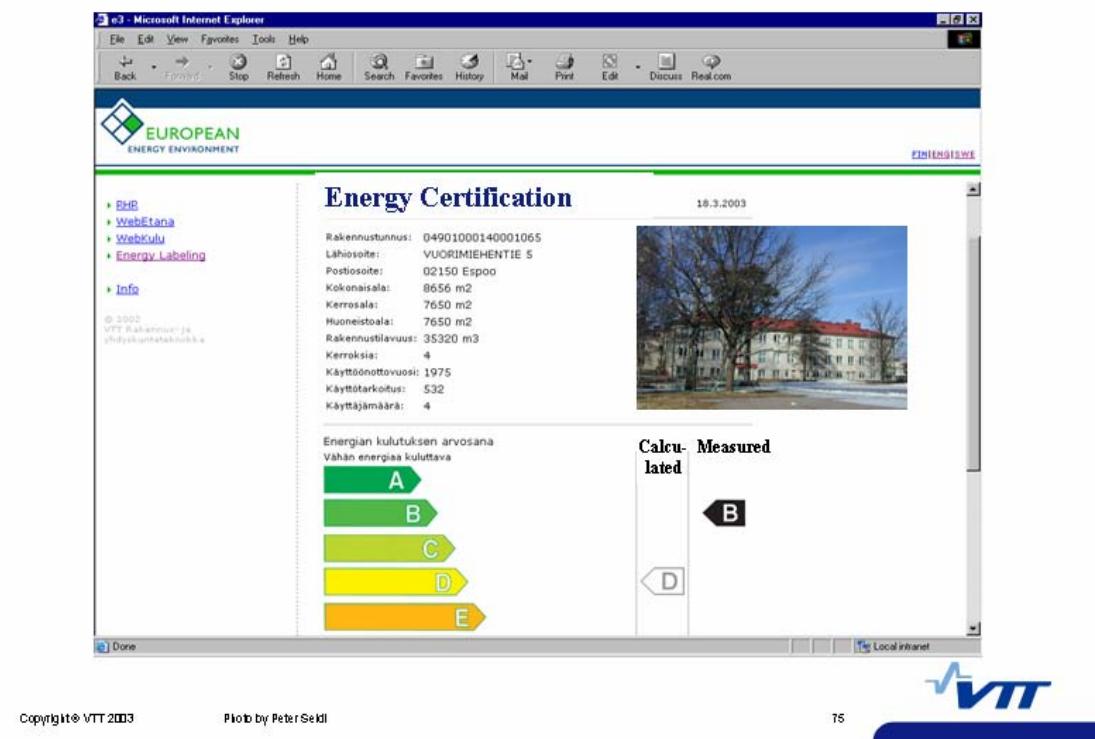
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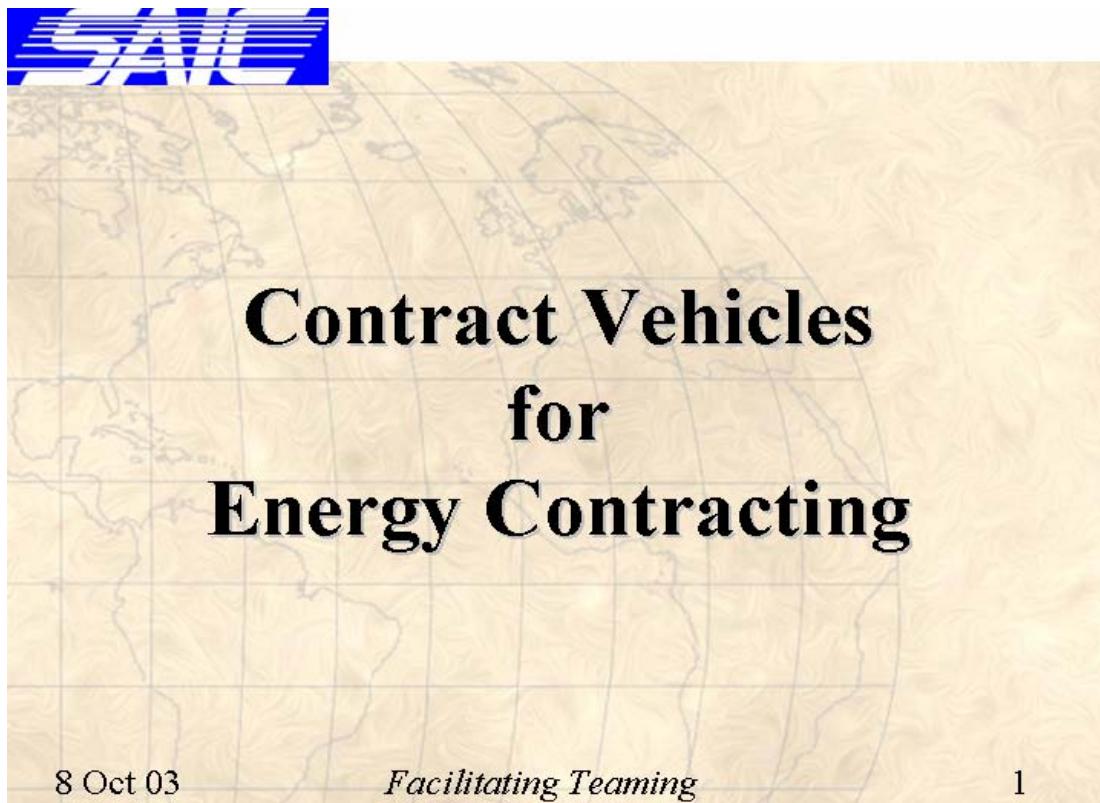


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Energy Savings Performance Contracts - Vehicles and Financing Options

Presenter: Mr. Buster Barksdale, SAIC



The background of the slide features a globe map with a grid overlay. In the top left corner, there is a blue rectangular logo with the word "SAIC" in white, stylized letters. The main title of the presentation, "Contract Vehicles for Energy Contracting", is centered on the slide in a large, bold, black serif font. Below the title, the date "8 Oct 03" is positioned to the left, and the phrase "Facilitating Teaming" is centered in an italicized black font. In the bottom right corner, the number "1" is displayed.

Contract Vehicles for Energy Contracting

8 Oct 03 *Facilitating Teaming* 1



Agenda

- Performance Contracts
- Contract Vehicles
- Financing

8 Oct 03

Facilitating Teaming

2



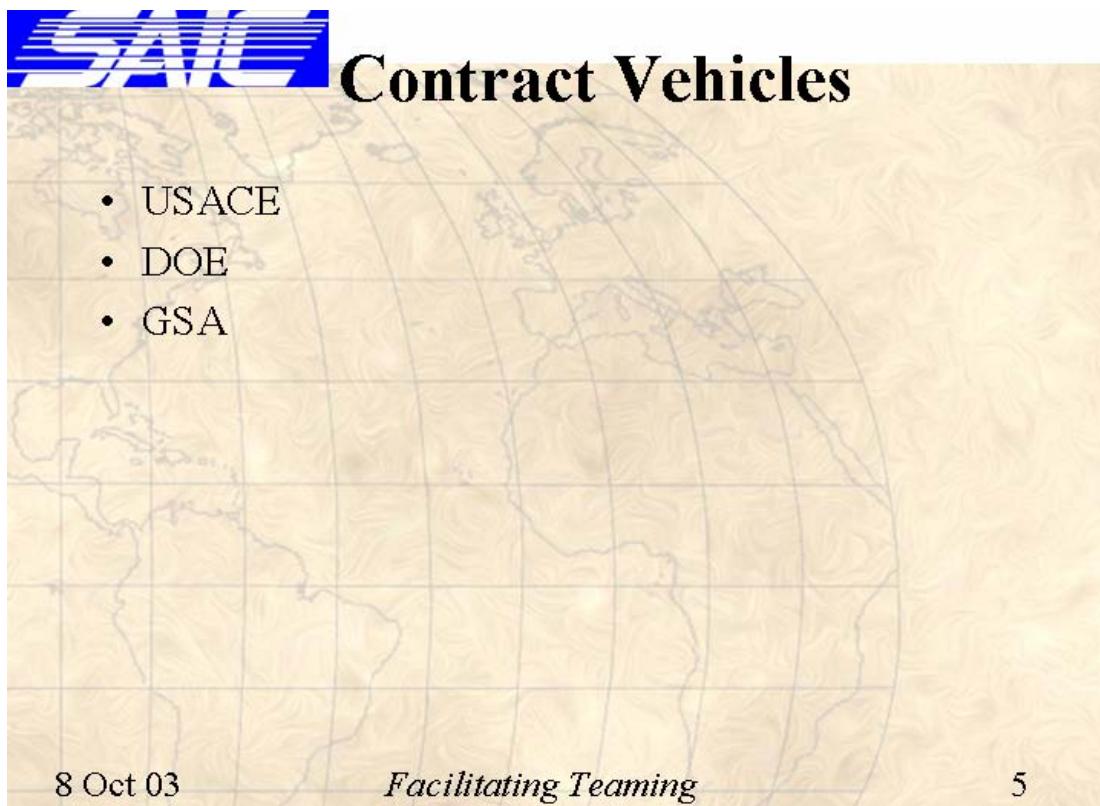
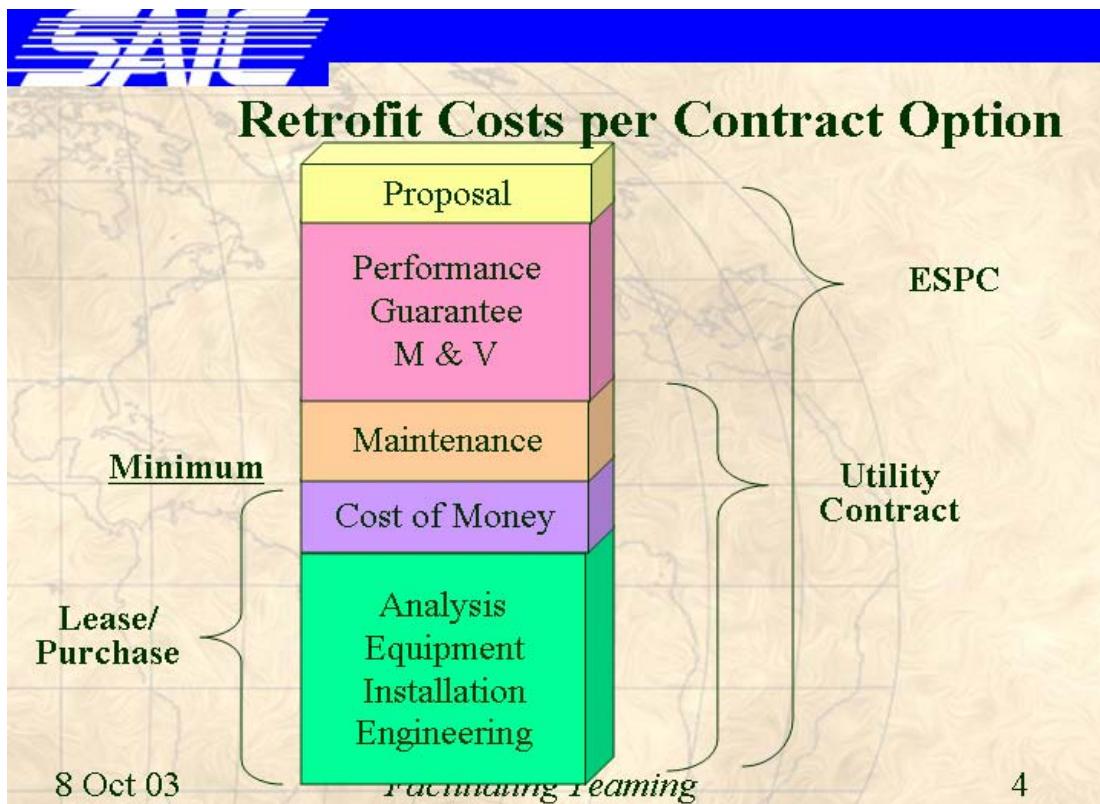
Performance Contracts

- ESPC
- UESC
- GSA

8 Oct 03

Facilitating Teaming

3





Contract Vehicles USACE

- Types
 - 4 State
 - 46 State
- Access
 - USACE with basic funding
- Advantages/Disadvantages
 - Large Experienced Staff
 - Understands Army
 - Ties into USACE Infrastructure
 - Costs most to Installation
 - Slow Execution

8 Oct 03

Facilitating Teaming

6



USACE Contracts

4-State Area	46 State Area
(GA, SC, NC, VA)	(Remaining states plus DC and Puerto Rico)
Co-Energy	Abacus
Duke Solutions	CMS Viron
Honeywell	Duke Solutions
NORESCO	Energy Masters International
Select Energy	Honeywell International
Systems Corps	Johnson Controls
	NORESCO
	Select Energy Services
	Sempra Energy Services
	XENERGY

8 Oct 03

Facilitating Teaming

7



Contract Vehicles DOE

- Types
 - Regional
- Access
 - Local CO
 - DESC
 - Other CO
- Advantages/Disadvantages
 - Lower Cost
 - Flexible Execution Through any CO
 - Faster Execution
 - Does not Speak Army
 - Need Facilitators

8 Oct 03 *Facilitating Teaming* 8



DOE

Western	Central	Midwest	Southeast	Mid-Atlantic	Northeast
Honeywell	Duke	Cogenex	Duke	Cogenex	Honeywell
Johnson	Honeywell	Duke	Energy Masters	Honeywell	Invensys
NORESCO	Johnson	Johnson	Honeywell	Invensys	Johnson
Sempra	NORESCO	NORESCO	Johnson	NORESCO	NORESCO
	Sempra	Sempra	NORESCO	Select Energy	Select Energ
			Sempra		Sempra
					XENERGY

8 Oct 03 *Facilitating Teaming* 9



DOE ESPC

Geothermal	Photovoltaic	Solar Thermal	Bio Mass
Constellation	Select Energy	Industrial Solar	Award in January 2002
Duke	Sempra		
Energy Performance Services			
Enron			
Trane			

8 Oct 03

Facilitating Teaming

10



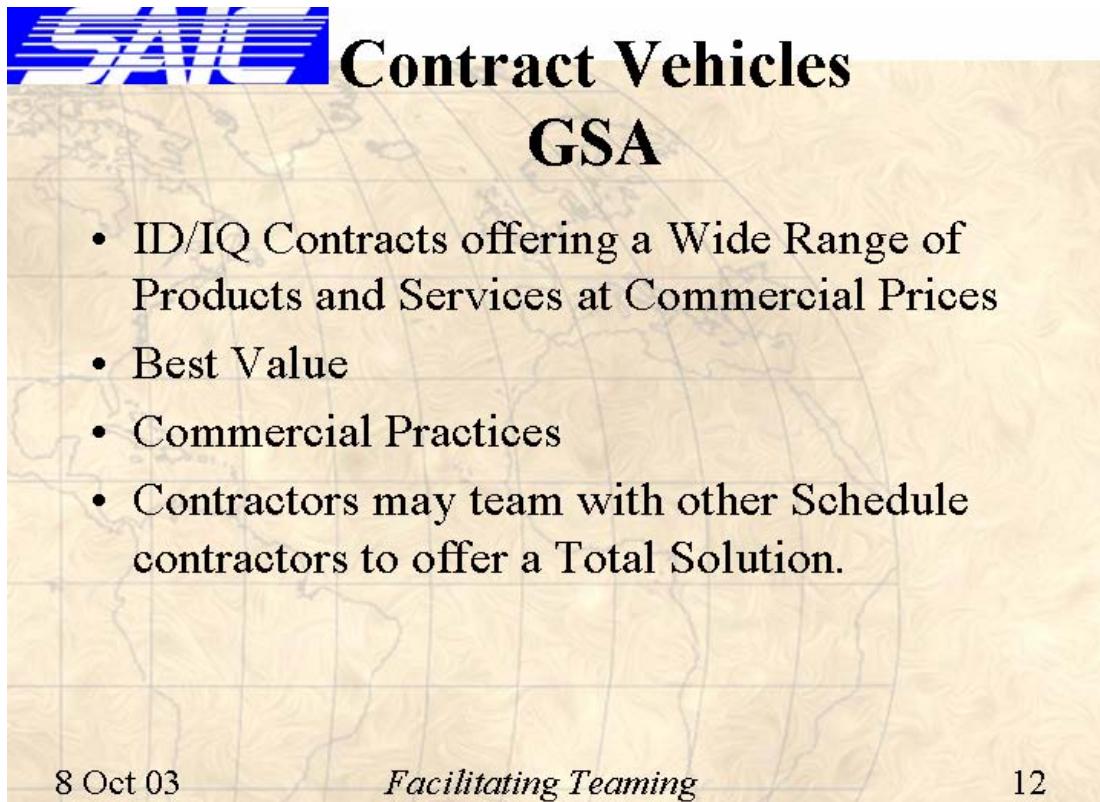
Contract Vehicles GSA

- Types
 - Basic Schedule
- Access
 - Local CO
 - GSA Dallas Specialized CO
 - Other CO
- Advantages/Disadvantages
 - Fastest Execution
 - Least Cost
 - No Technical Support
 - Lack of Contract Vehicle Familiarity
 - Needs Facilitator

8 Oct 03

Facilitating Teaming

11



Contract Vehicles

GSA

- ID/IQ Contracts offering a Wide Range of Products and Services at Commercial Prices
- Best Value
- Commercial Practices
- Contractors may team with other Schedule contractors to offer a Total Solution.

8 Oct 03 *Facilitating Teaming* 12



Contract Vehicles

GSA

- Simplified Ordering Procedures
- Flexibility
- Maximum Order Provisions
- Price Reductions
- Blanket Purchase Agreements
- Teaming
- Purchase Card
- Socio-economic goals

8 Oct 03 *Facilitating Teaming* 13



UESC

- A vehicle for developing, financing, and implementing comprehensive energy/water-conservation projects for federal facilities
- Utilities provide up-front project funding and agencies pay for the services over time on their utility bills
- Utilities have a long-term interest in their customers, and that's helped us get great deals that meet our needs.

8 Oct 03

Facilitating Teaming

14



UESC

- Financing
- Minimizes time and resources required for procurement
- One-stop shopping for turnkey project
- Dealing with known entity
- Payment through utility bill
- Flexibility in contract terms

8 Oct 03

Facilitating Teaming

15



UESC

10 USC 2865 and 2866

- May enter into "sole source" procurement from gas or electric utilities to design and implement cost effective demand and conservation services
- May implement projects with a positive Net Present Value (measured over a period of 10 years or less)
- Can count water cost savings in their economic analysis

8 Oct 03

Facilitating Teaming

16



Financing

- 3rd Party
- BPA
- Lease
- Enhanced Use Lease

8 Oct 03

Facilitating Teaming

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Summary

- Plenty of Options
- Need Facilitators Regardless of Option
- New Guidance will Help Process

8 Oct 03

Facilitating Teaming

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